

**Amendment and Response**

Applicant: Curtis Gregory Kelsay

Serial No.: 09/491,994

Filed: January 26, 2000

Docket No.: 10990356-2

Title: AN OPTICAL INTERLINK BETWEEN AN OPTICAL TRANSDUCER AND OPTICAL DATA PORT**REMARKS**

The following remarks are made in response to the Non-Final Office Action mailed August 26, 2003, in which claims 20-23, 25-29, 33-39, and 41 were rejected. With this Amendment, 20, 28, 34, and 41 have been amended to clarify Applicant's invention and claims 42-50 have been added. Claims 20-23, 25-29, 33-39, and 41-50, therefore, remain pending in the application and are presented for reconsideration and allowance.

**Claim Rejections under 35 U.S.C. § 103**

Claims 20-23, 25-29, 33-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Tsuji U.S. Patent No. 5,796,890 in view of the Pressler U.S. Patent No. 6,005,700, Sedlmayr U.S. Patent No. 6,034,818, and Kawakami U.S. Patent No. 5,848,203.

With this Amendment, independent claim 20 has been amended to clarify that the transmit light pipe is configured to exit and diverge light from the optical data port to the open environment, and to clarify that the receive light pipe is configured to converge light from the open environment on the optical transducer. In addition, independent claim 34 has been amended to clarify that the light pipe has a second end configured to provide an optical data port arranged to communicate with an open environment, to clarify that the transmit lens is configured to increase an angle of illumination of light exiting the optical data port to the open environment, and to clarify that the receive lens is configured to collimate light from the open environment into the light pipe. Furthermore, independent claims 28 and 41 have been amended to clarify that each include a method of optically coupling an optical transducer which transmits and receives information optically with an optical data port which communicates with an open environment.

With respect to the Tsuji, Pressler, Sedlmayr, and Kawakami patents, Applicant submits that none of these patents, individually or in combination, teach or suggest a light pipe assembly, as claimed in independent claim 20, including a transmit light pipe configured to exit and diverge light from an optical data port to an open environment and a receive light pipe configured to converge light from the open environment on an optical transducer, an optical interlink, as claimed in independent claim 34, including a light pipe having a second end configured to provide an optical data port arranged to communicate with an open environment, a transmit lens configured to increase an angle of illumination of light exiting

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the optical data port to the open environment, and a receive lens configured to collimate light from the open environment into the light pipe, nor a method of optically coupling an optical transducer which transmits and receives information optically with an optical data port which communicates with an open environment, as claimed in independent claims 28 and 41.

For example, the Tsuji patent discloses a control station 10 and a field station 20 connected by optical fibers 41a and 41b (Fig. 1; col. 8, lines 28-41). Light which passes through optical fiber 41a of the Tsuji patent from field station 20 to control station 10 is reflected by an optical light splitter-coupler 133 to a light receiver 132 both of which are located within control station 10 (Fig. 1; col. 8, lines 52-57). Light which passes through optical fiber 41a from field station 20 to control station 10, therefore, does not exit from control station 10 to an open environment around control station 10. Rather, light which passes through optical fiber 41a from field station 20 to control station 10 is contained within control station 10.

In addition, light which passes through optical fiber 41b of the Tsuji patent from control station 10 to field station 20 is received from a light source 134 which is located within control station 10 (Fig. 1; col. 8, lines 60-62). Light which passes through optical fiber 41b from control station 10 to field station 20, therefore, is not received from an open environment around control station 10. Rather, light which passes through optical fiber 41b from control station 10 to field station 20 is received from within control station 10.

The Examiner contends that the Pressler patent teaches light pipes that receive and transmit light rays to and from data ports to the open environment and, as such, suggests that the optical fibers of the Tsuji patent are capable of receiving and transmitting light rays to the open environment. Applicant, however, submits that modifying the Tsuji patent in view of the Pressler patent, in the manner suggested by the Examiner, would not result in the present invention.

For example, the Pressler patent discloses a detachable antenna 103 which includes a light transfer medium such as light pipes 160 and 165 which are utilized to transfer light emitted from LEDs 150, 155 and to apertures 170 through detachable antenna 103 so as to be emitted from respective apertures 172 (Fig. 1; col. 4, lines 26-54). Apertures 172 of the Pressler patent, however, do not optically transmit information to and optically receive information from edge 173 of detachable antenna 103. Apertures 172 of the Pressler patent,

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therefore, do not constitute an optical data port, as claimed in independent claims 20, 28, 34, and 41. In addition, apertures 170 of the Pressler patent do not optically receive information from and optically transmit information to LEDs 150,155. LEDs 150,155 of the Pressler patent, therefore, do not constitute an optical transducer, as claimed in independent claims 20, 28, 34, and 41.

In view of the above, Applicant submits that independent claims 20, 28, 34, and 41 are patentably distinct from the Tsuji, Pressler, Sedlmayr, and Kawakami patents and, therefore, are in a condition for allowance. Furthermore, as dependent claims 21-23 and 25-27 further define patentably distinct claim 20, dependent claims 29 and 33 further define patentably distinct claim 28, and dependent claims 35-39 further define patentably distinct claim 34, Applicant submits that dependent claims 21-23 and 25-27, 29 and 33, and 35-39 are also in a condition for allowance. Applicant, therefore, requests that the rejection of claims 20-23, 25-29, 33-39, and 41 under 35 U.S.C. 103(a) be reconsidered and withdrawn and that claims 20-23, 25-29, 33-39, and 41-50 be allowed.

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In view of the above, Applicant respectfully submits that pending claims 20-23, 25-29, 33-39, and 41-50 are all in a condition for allowance and requests reconsideration of the application and allowance of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to either Gregg W. Wisdom at Telephone No. (360) 212-8052, Facsimile No. (360) 212-3060 or Scott A. Lund at Telephone No. (612) 573-2006, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.101. The undersigned hereby certifies that this paper or papers, as described herein, are being transmitted to the United States Patent and Trademark Office, File No. 09/491,994 on this 26 <sup>th</sup> day of November 2003.	
Name: Scott A. Lund	